



Australian Government

**Assessment Requirements for PPMEPG201
Monitor and control power generation
systems**

Release: 1

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Modification History

Release	Comments
Release 1	This version released with PPM Pulp and Paper Manufacturing Training Package Version 3.0.

Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has undertaken routine monitoring and control of a power generation system for at least two operational intervals, including for each interval:

- completed checks and measures throughout the process and responded appropriately to variations from specifications
- completed accurate records for system operation and equipment faults
- communicated clear information on power generation operation status for handover.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety requirements and procedures for power generation operations
- permits and licensing requirements for facility hazards and high risk plant and equipment relevant to power generation operations
- workplace environmental sustainability requirements and practices for power generation operations, including workplace biotechnological applications and processes
- characteristics and dangers of heat and energy generated by power generation systems
- purpose, features and operation of power generation and distribution systems, operating parameters and allowable variations, including:
 - electrical isolation procedures
 - principles of operation of transformers and circuit protection systems
 - AC/DC generation principles
 - electrical output control and regulation principles
 - power factor characteristics and effects
 - effect of steam quality on turbine operation

- operation and application of electronic and other control systems to control power generation operations
- data used to monitor power generation system performance, including:
 - heat levels
 - pressure levels
 - energy generation levels
 - heat build-up
 - system overload information
 - test outcomes for fuel
 - past performance records
- standard operating procedures specific to power generation operations
- procedures for communicating, recording and reporting for boiler operations, processes and faults.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in a manufacturing facility or an environment that accurately reflects performance in a workplace
- resources, equipment and materials:
 - power generation system that is either steam generated and produces power output of less than 500kW or uses gas fired turbine that produces power greater than 500kW
 - high and low voltage transformers
 - steam or gas turbine driven alternators
 - switchboards
 - water systems and auxiliary plant
 - circuit breaker
 - AC/DC generation and distribution systems
 - analogue and digital instrumentation
 - chemicals and other process supplies
 - electronic control systems, including digital control system, touch screens or robotics required to control power generation operations
 - personal protective equipment required for operating a power generation system
 - proforma or recording system for recording data and information on power generation operations
- specifications:
 - workplace and standard operating procedures relating to power generation operations, including health and safety, risks and hazards identification, plant isolation, quality, housekeeping and environmental requirements
- relationships:

- relevant personnel for the purposes of communicating information.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=12998f8d-d0ac-40bc-a69e-72a600d4fd93>